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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

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.l		P10/SB/21 (04-04) {
Application Number	10/670,162	
Filing Date	September 23, 2003	
First Named Inventor	PAVLOVSKAIA, ELENA	
Art Unit	2125	
Examiner Name -	Elliot L. Frank	
Attorney Docket Number	018563-004620US	

Total Number of	Pages in This Submission	13	Attorney Docket Number	018563-00462	20US	
		ENG	CLOSURES (Check all that	apply)		
Amendment A Amendment A A Extension Express A	emittal Form ee Attached ent/Reply fter Final ffidavits/declaration(s) of Time Request Abandonment Request on Disclosure Statement		Drawing(s) Licensing-related Papers Petition Petition to Convert to a Provisional Application Power of Attorney, Revocation Change of Correspondence Addre Terminal Disclaimer Request for Refund CD, Number of CD(s) (Reference Copies)	Aftro to Apply of Apply	Technologeal Con Appeals of Peal Con Peal Con Peal Noti Oprietary atus Lette Her Enck Entify bekenstcard	osure(s) (please
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or Individual name	Townsend and Town James M. Heslin	isend ar		No. 29,541		
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TOWNSEND and TOWNSEND and CREW LLP

y: Tiffony Wu

Tiffany Wu

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

ELENA PAVLOVSKAIA et al.

Application No.: 10/670,162

Filed: September 23, 2003

For: EFFICIENT DATA

REPRESENTATION OF TEETH

MODEL

Examiner: Elliot L. Frank

Art Unit: 2125

INFORMATION DISCLOSURE

STATEMENT UNDER 37 CFR §1.97 and

§1.98

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Electronic copies of the references are enclosed on 1 CD-ROM disk.

It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

The references cited in the accompanying PTO/SB/08A and PTO/SB/08B, were indentified by either or both parties in litigation between Align Technology, Inc., assignee of the above-referenced patent application, and Ormco Corporation in case no. SACV 03-16-GLT

ELENA PAVLOVSKAIA et al. Application No.: 10/670,162

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(ANX) before the U.S. District Court, Central District of California, Southern Division, as being potentially relevant to the design, fabrication, and/or use of removable orthodontic appliances and/or to the use of computers or other automatic means for calculating final or intermediate tooth positions for orthodontic treatment.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

This IDS is being filed before the mailing date of the final Office Action or Notice of Allowance.

Please charge the IDS fee of \$180 to Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

James M. Heslin Reg. No. 29,541

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JMH:tfw

60301643 v1

PTO/SB/08A (08-03)

SEP 2 0 2004

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 10

·	Complete if Known
Application Number	10/670,162
Filing Date	September 23, 2003
First Named Inventor	PAVLOVSKAIA, ELENA
Art Unit	2125
Examiner Name	Elliot L. Frank
Attorney Docket Number	018563-004620US

		Document Number	U.S. PATENT DO		
Examiner Initials*	Cite No.1	Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	2,467,432	04-19-1949	Kesling	
	AB	3,660,900	05-09-1972	Andrews	
	AC	3,860,803	01-14-1975	Levine	
	AD	3,916,526	11-04-1975	Schudy	
	AE	3,950,851	04-20-1976	Bergersen	
	AF	4,014,096	03-29-1977	Dellinger	
	AG	4,195,046	03-25-1980	Kesling	•
	AH	4,324,546	04-13-1982	Heitlinger et al.	
	Al	4,348,178	09-07-1982	Kurz	
	AJ	4,478,580	10-23-1984	Barrut	
	AK	4,504,225	03-12-1985	Yoshii	
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	AM	4,575,805	03-11-1986	Moermann, et al.	
	AN	4,611,288	09-09-1986	Duret et al.	
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	AR	4,755,139	07-05-1988	Abbatte et al.	
	AS	4,763,791	08-16-1988	Halverson et al.	
	AT	4,793,803	12-27-1988	Martz	
	AU	4,798,534	01-17-1989	Breads	
	AV	4,837,732	06-06-1989	Brandestini et al.	
	AW	4,850,864	07-25-1989	Diamond	
	AX	4,856,991	08-15-1989	Breads et al.	
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	ВМ	5,131,844	07-21-1992	Marinaccio et al.	
	BN	5,139,419	08-18-1992	Andreiko et al.	
	во	5,184,306	02-02-1993	Erdman et al.	

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60301643 v1

Substitute for form 1449A/PTO	Complete if Known		
	Application Number	10/670,162	
INFORMATION DISCLOSURE	Filing Date	September 23, 2003	
STATEMENT BY APPLICANT	First Named Inventor	PAVLOVSKAIA, ELENA	
	Art Unit	2125	
(use as many sheets as necessary)	Examiner Name	Elliot L. Frank	
Sheet 2 of 10	Attorney Docket Number	018563-004620US	

	•		U.S. PATENT D	OCUMENTS+	
Examiner Initials*	Cite No.1	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	BP	5,186,623	02-16-1993	Breads et al.	
	BQ	5,257,203	10-26-1993	Riley et al.	
	BR	5,273,429	12-28-1993	Rekow et al.	
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	BW	5,368,478	11-29-1994	Andreiko et al.	
	вх	5,382,164	01-17-1995	Stern	
	BY	5,395,238	03-07-1995	Andreiko et al.	
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	CA	5,440,496	08-08-1995	Andersson et al.	
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	CD	5,454,717	10-03-1995	Andreiko et al.	
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	CG	5,518,397	05-21-1996	Andreiko et al.	
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	СК	5,587,912	12-24-1996	Andersson et al.	
	CL	5,605,459	02-25-1997	Kuroda et al.	
	СМ	5,607,305	03-04-1997	Andersson et al.	
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	со	5,655,653	08-12-1997	Chester	
	СР	5,683,243	11-04-1997	Andreiko et al.	
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	CR	5,740,267	04-14-1998	Echerer et al.	
	cs	5,975,893	11-02-1999	Chishti et al.	<u> </u>

		-		FOREIGN PA	TENT DOCUME	ENTS		
	Cite	For	eign Patent Doo	cument	Publication Date MM-DD-YYYY	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
	No.1	Country Code ³	Number ⁴	Kind Code ⁶ (if known)		Applicant of Cited Document		T⁵
	СТ	EP	091,876	A1	10-19-1983	Duret		\sqcap
	CU	EP	299,490	A2	01-18-1989	Steinbichler et al.		
	CV	EP	376,873	A2	07-04-1990	Shafir		
	cw	EP	490,848	B1	06-17-1992	Andersson et al.		
	сх	EP	541,500	A1	06-12-1998	Andersson et al.		

Examiner Signature	Date Considered		

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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*Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04.

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*For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

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60301643 v1

Substitu	te for form 1449A/PT	го		Complete if Known		
				Application Number	10/670,162	
INFO	DRMATION	I DI	SCLOSURE	Filing Date	September 23, 2003	
STA	TEMENT E	BY A	PPLICANT	First Named Inventor	PAVLOVSKAIA, ELENA	
				Art Unit	2125	
(use as many sheets as necessary)			s necessary)	Examiner Name	Elliot L. Frank	
Sheet	3	of	10	Attorney Docket Number	018563-004620US	

				FOREIGN PA	TENT DOCUME	ENTS		
C	Cit-	For	eign Patent Docu	ument		Name of Patentee or	Pages, Columns, Lines, Where Relevant	
Examiner Initials*	Cite No.1	Country Code ³	Number ⁴	Kind Code ⁸ (if known)	Publication Date MM-DD-YYYY	Applicant of Cited Document	Passages or Relevant Figures Appear	T ⁶
	CY	EP	731,673	B1	09-18-1998	Andersson et al.		
	CZ	EP ·	774,933	. B1	05-28-1997	Oden et al.		
	DA	FR	2,652,256	A1	03-29-1991	Jourda		
	DB	FR	2,369,828	A1	06-02-1978	Suyehiro		
	DC	wo	90/08,512	A1	08-09-1990	Lemcren		
	DD	wo	91/04,713	A1	04-18-1991	Jourda et al.		
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	DF	wo	98/44,865	A1	10-15-1998	Andersson		
	DG	wo	98/58,596	A1	12-30-1998	Chishti et al.		

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I INIFO	DMATION DI	COLOCUDE	Application Number	10/670,162		
	RMATION DI		Filing Date	September 23, 2003		
STAT	EMENT BY A	APPLICANT	First Named Inventor	PAVLOVSKAIA, ELENA		
<u> </u>			Art Unit	2125		
(1	ise as many sheets a	as necessary)	Examiner Name	Elliot L. Frank		
Sheet	4 of	10	Attorney Docket Number	018563-004620US		

		NON PATENT LITERATURE DOCUMENTS	_
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	DH	ALEXANDER et al., "The DigiGraph Work Station Part 2, Clinical Management," JCO (July 1990), pp. 402-407.	
	Di	ALTSCHULER et al., "Laser Electro-Optic System for Rapid Three-Dimensional (3D) Topographic Mapping of Surfaces," <i>Optical Engineering</i> , Vol. 20(6) (1981), pp. 953-961.	
	DJ	ALTSCHULER et al, "Measuring Surfaces Space-Coded by a Laser-Projected Dot Matrix," SPIE Imaging Applications for Automated Industrial Inspection and Assembly, vol. 182 (1979), p. 187-191.	
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	DL ·	ALTSCHULER, "3D Mapping of Maxillo-Facial Prosthesis," AADR Abstract #607,1980, 2 pages total	
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	DN	ANDERSSON et al., "Clinical Results with Titanium Crowns Fabricated with Machine Duplication and Spark Erosion," <i>Acta Odontological Scandinavia</i> , vol. 47 (1989), pp. 279-286.	
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	DP	BAUMRIND et al., "Mapping the Skull in 3-D, Reprinted from The Journal, California Dental Association, Vol. 48, No. 2 (1972 Fall Issue) 11 pages total.	
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	DS	BAUMRIND, "Integrated Three-Dimensional Craniofacial Mapping: Background, Principles, and Perspectives," Seminars in Orthodontics, Vol. 7, No. 4 (Dec. 2001), pp. 223-232.	
	DT	BEGOLE et al., "A Computer System for the Analysis of Dental Casts," <i>The Angle Orthodontist</i> , Vol. 51 No. 3 (July 1981), pp. 253-259.	
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	DW	BIGGERSTAFF et al., "Computerized analysis of occlusion in the postcanine dentition," American Journal of Orthodontics, Vol. 61, No. 3 (Mar. 1972), pp. 245-254.	

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Examiner	Date	
Signature	 Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). Applicant is to place a check mark here if English language Translation is attached.

Substitute	NFORMATION DISCLOSURE				Complete if Known
INFO		LDIC	OL OCUDE	Application Number	10/670,162
_	INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) Sheet 5 of 10		Filing Date	September 23, 2003	
STAT		PPLICANT	First Named Inventor	PAVLOVSKAIA, ELENA	
				Art Unit	2125
(1	(use as many sheets as necessary)			Examiner Name	Elliot L. Frank
Sheet	5	of	10 _	Attorney Docket Number	018563-004620US

		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item	
Examiner Initials *	Cite No. ¹	(book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Т
	DX	BIGGERSTAFF, "Computerized Diagnostic Setups and Simulations," <i>The Angle Orthodontist</i> , Vol. 40, No. 1 (Jan. 1970), pp. 28-36.	
	DY	BRANDESTINI et al., "Computer Machined Ceramic Inlays: In Vitro Marginal Adaptation," Journal of Dental Research, Vol. 64/Special Issue/Abstracts, IADR/AADR Abstracts 1985, 1 page total.	
	DZ	BROOK et al., "An Image Analysis System for the Determination of Tooth Dimensions from Study Casts: Comparison with Manual Measurements of Mesio-distal Diameter, Abstract of Papers, 1985, Dept. of Children's Dentistry and Orthodontics, <i>J Dent Res.</i> , March 1986, pp. 428-431.	
	EA	BURSTONE (interview), "Dr. Charles J. Burstone on The Uses of the Computer in Orthodontic Practice (Parts1 and 2)," <i>Journal of Clinical Orthodontics</i> , (Part 1) Vol. 8, No. 7, July 1979; (Part 2) Vol. 8, No. 8 pp. 539-551, Aug. 1979.	
	EB	BURSTONE et al., "Precision adjustment of the transpalatal lingual arch: Computer arch form predetermination," Am. Journal of Orthodontics, Vol. 79, No. 2 (Feb. 1981), pp. 115-133.	
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	ED	CHAFETZ et al., "Subsidence of the Femoral Prosthesis, A Stereophotogrammetric Evaluation," Clinical Orthopaedics and Related Research, No. 201 (December 1985), pp. 60-67.	
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	EF	COTTINGHAM, "Gnathologic clear plastic positioner" Am. J. Orthod., 55:23-31, 1969.	
	EG	CRAWFORD, "Computers in Dentistry: Part 1: CAD/CAM: The Computer Moves Chairside," "Part 2: F. Duret — A Man With A Vision," "Part 3: The Computer Gives New Vision- Literally," "Part 4: Bytes 'N Bites" The Computer Moves From The Front Desk To The Operatory, Canadian Dental Journal, vol. 54(9), (1988), pp. 661-666.	
	EH	CRAWFORD, "CAD/CAM in the Dental Office: Does It Work?" Canadian Dental Journal, Vol. 57, No. 2 (Feb. 1991), pp. 121-123.	
	EI	CROOKS, "CAD/CAM Comes to USC," USC Dentistry, (Spring 1990) pp. 14-17.	
	EJ	CURETON, "Correcting malaligned mandibular incisors with removable retainers" J. Clin. Orthod., 30:390-395, 1996.	
	EK	CURRY et al., "Integrated Three-Dimensional Craniofacial Mapping at the Craniofacial Research Instrumentation Laboratory/University of the Pacific," Seminars in Orthodontics, Vol. 7, No. 4 (Dec. 2001), pp. 258-265.	
	EL	CUTTING et al., "Three-Dimensional Computer-Assisted Design of Craniofacial Surgical Procedures: Optimization and Interaction with Cephalometric and CT-Based Models," <i>Plastic and Reconstructive Surgery</i> , Vol. 77, No. 6 (June 1986), pp. 877-885.	
	EM	DCS Dental AG, "The CAD/CAM 'DCS Titan System' for Production of Crowns/Bridges" DSC Production AG, Jan. 1992, pp. 1-7.	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance

Considered

Signature

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Substitute	for form 1449E	з/РТО		Complete if Known			
INITO		NI DIC	CL OCUDE	Application Number	10/670,162		
			CLOSURE	Filing Date	September 23, 2003		
STAT	EMENT	BYA	PPLICANT	First Named Inventor	PAVLOVSKAIA, ELENA		
				Art Unit	2125		
(0	(use as many sheets as necessary)			Examiner Name	Elliot L. Frank		
Sheet	6	of	10	Attorney Docket Number	018563-004620US		

		NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item	_
Examiner Initials *	Cite No.1	(book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Т;
	EN	DEFRANCO et al., "Three-Dimensional Large Displacement Analysis of Orthodontic Appliances," J. Biomechanics, Vol. 9 (1976), pp. 793-801.	
	EO	Dental Institute University of Zurich Switzerland, Program for International Symposium on Computer Restorations: State of the Art of the CEREC-Method, May 1991, 3 pages total.	
	EP	DenTrac Corporation, Dentrac document, pp. 4-13.	
	EQ	DURET et al, "CAD-CAM in Dentistry," Journal of the American Dental Association, Vol. 117 (Nov. 1988), pp. 715-720.	
	ER	DURET et al., "CAD/CAM imaging in dentistry," Current Opinion in Dentistry, Vol. 1 (1991), pp. 150-154.	
	ES	DURET, "The Dental CAD/CAM, General Description of the Project," Hennson International Product Brochure, Jan. 1986., 18 pages total.	
_	ET	DURET, "Vers une prosthese informatisee," (English translation also attached), <i>Tonus</i> , vol. 75, (Nov. 15, 1985), pp. 55-57.	
	EU	ECONOMIDES, "The Microcomputer in the Orthodontic Office," JCO, (Nov. 1979), pp. 767-772.	
	EV	ELSASSER, "Some observations on the history and uses of the Kesling positioner" Am. J. Orthod., 36:368-374, 1950.	
	EW	FABER et al., "Computerized interactive orthodontic treatment planning," Am. J. Orthod., Vol. 73, No. 1 (Jan. 1978), pp. 36-46.	
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	EY	FRIEDE et al., "Accuracy of Cephalometric Prediction in Orthognathic Surgery, "Abstract of Papers, Journal of Dental Research, Vol. 70 (1987), pp. 754-760.	
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	FA	GRAYSON, "New Methods for Three Dimensional Analysis of Craniofacial Deformity," Symposium: Computerized Facial Imaging in Oral and Maxilofacial Surgery, AAOMS Sept. 13, 1990, 3 pages total.	
	FB	GUESS et al., "Computer Treatment Estimates in Orthodontics and Orthognathic Surgery, "JCO, (April, 1989), pp. 262-28.	
	FC	HEAVEN et al., "Computer-based Image Analysis of Artificial Root Surface Caries," "Automated Identification of Landmarks in Cephalometric Radiographs," Abstracts of Papers, <i>Journal of Dental Research</i> , Vol. 67, March 9-13, 1988, 2 pages total.	

Examiner	Date	
Signature	Considered	

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Substitute for form 1449B/PTO		Complete if Known
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)	Application Number	10/670,162
	Filing Date	September 23, 2003
STATEMENT BY APPLICANT	First Named Inventor	PAVLOVSKAIA, ELENA
	Art Unit	2125
(use as many sheets as necessary)	Examiner Name	Elliot L. Frank
Sheet 7 of 10	Attorney Docket Number	018563-004620US

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	, T
	FD	HOFFMANN et al., "Role of Cephalometry for Planning of Jaw Orthopedics and Jaw Surgery Procedures," (Article Summary in English, article in German), <i>Informationen</i> , (March 1991), pp. 375-396.	
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	FJ	JONES et al., "An Assessment of the Fit of a Parabolic Curve to Pre- and Post-Treatment Dental Arches," British Journal of Orthodontics, Vol. 16 (1989), pp. 85-93.	
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\ <u></u>	FR	LAURENDEAU et al., "A Computer-Vision Technique for the Acquisition and Processing of 3-D Profiles of Dental Imprints: An Application in Orthodontics," <i>IEEE Transactions on Medical Imaging</i> , Vol. 10, No. 3 (Sept. 1991), pp. 453-461.	
	FS	LEINFELDER et al., "A new method for generating ceramic restorations: a CAD-CAM system," <i>Journal Of The American Dental Assoc.</i> , Vol. 118, No. 6 (Jun. 1989), pp. 703-707.	

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	FT	MCNAMARA et al., Orthodontic and Orthopedic Treatment in the Mixed Dentition, Needham Press, January 1993. pp.347-353.	
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	GD	PONITZ, Invisible Retainers, 59 Am. J. Orthodontics, March 1971, pp. 266-272.	
	GE	Procera Research Projects, PROCERA Research Projects 1993 — Abstract Collection, 1993, pp. 3-28.	
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	GG	REKOW, "CAD/CAM in Dentistry: A Historical Perspective and View of the Future," <i>Journal</i> , Vol. 58 No. 4, (April 1992), pp. 283, 287-288.	
	GH	REKOW, "Computer-Aided Design and Manufacturing in Dentistry: A Review of the State of the Art," The Journal of Prosthetic Dentistry, Vol. 58, No. 4 (Oct. 1987), pp. 512-516.	
	GI	REKOW, "Dental CAD-CAM Systems: What is the State of the Art?" Journal of the American Dental Assoc., Vol. 122 (1991), pp. 43-48.	1

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	GO	SCHELLHAS et al., "Three-Dimensional Computer Tomography in Maxillofacial Surgical Planning," Arch Otolamgol Head Neck Surg. Vol. 114 (April 1988), pp. 438-442.	
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	GQ	SHILLIDAY, "Minimizing finishing problems with the mini-positioner" Am. J. Orthod. 59:596-599, 1971	
	GR	Siemens, "CEREC - Computer-Reconstruction, "High Tech in der Zahnmedizin, 14 page total.	
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	GX	VAN DER LINDEN et al., Three-Dimensional Analysis of Dental Casts by Means of the Optocom," J Dent Res, July-August 1972, p. 1101.	
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	GZ	VAN DER ZEL, "Ceramic-fused-to-metal Restorations with a New CAD/CAM System," Quintessence International, vol. 24(11) (1993), pp. 769-778.			
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